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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,749	06/14/2006	Martin Brunner	PP/1-23002/A/PCT	5026

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JoAnn Villamizar
Ciba Corporation/Patent Department
540 White Plains Road
P.O. Box 2005
Tarrytown, NY 10591

EXAMINER	
BUTTNER, DAVID J	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
11/09/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

andrea.dececchis@ciba.com
deborah.pinori@ciba.com
sonny.nkansa@basf.com

Office Action Summary	Application No.	Applicant(s)	
	10/582,749	BRUNNER ET AL.	
	Examiner	Art Unit	
	David Buttner	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/23/09*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-16 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-16,18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 10-12,14,15 and 18-23 rejected under 35 USC 102(b) as anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over Nagao EP837085.

Nagao claims (#11) a polycarbonate based on bisphenol compounds and –O-Rf^2 terminal groups. Rf^2 (claim 12) can be F-$(CF_2)_r$-$(CH_2)_s$- which corresponds to applicant's preferred endgroups R^1 and R^2 when "r" is 4-15 and "s" is 2. The compound 1H, 1H, 2H, 2H perfluorohexanol (page 13 line 53) is one of several specific endcapping agents named that meet applicant's preferred R^1 and R^2. This polymer can be combined with antioxidants such as phenolic antioxidants (page 81 line 18; page 82 line 10). The polymer can be combined with another polycarbonate (page 18 line 16). Inherently, such a blending step would lower the surface energy of the other polycarbonate. The reduced viscosity of the polycarbonate (abstract) can be as low as 0.2 dl/g which indicates a low molecular weight and relatively few repeating units. Ishiwa '878 is cited for his correlation between Mw and viscosity (col 8 line 34).

Applicant's "extruded" limitation is product by process in nature (MPEP 2113). Nagao's mixing and coating from a solvent would be expected to result in the same final product after drying as applicant's extrusion technique.

Claims 10-15 and 18-23 rejected under 35 U.S.C. 103(a) as obvious over Nagao EP837085.

Nagao claims (#11) a polycarbonate based on bisphenol compounds and –O-Rf^2 terminal groups. Rf^2 (claim 12) can be F-$(CF_2)_r$-$(CH_2)_s$- which corresponds to applicant's preferred endgroups R^1 and R^2 when "r" is 4-15 and "s" is 2. The compound 1H, 1H, 2H, 2H perfluorohexanol (page 13 line 53) is one of several specific endcapping agents

named that meet applicant's preferred R^1 and R^2. This polymer can be combined with antioxidants such as phenolic antioxidants (page 81 line 18; page 82 line 10). The polymer can be combined with another polycarbonate (page 18 line 16). Inherently, such a blending step would lower the surface energy of the other polycarbonate. The reduced viscosity of the polycarbonate (abstract) can be as low as 0.2 dl/g which indicates a low molecular weight and relatively few repeating units. Ishiwa '878 is cited for his correlation between Mw and viscosity (col 8 line 34).

Nagao does not teach the relative amounts of fluorinated polycarbonate and other polycarbonate of applicant's claim 13.

It would have been within the ordinary skill of the art to vary the proportions of each polycarbonate to obtain a final product with the "in-between" properties of each.

Applicant's "extruded" limitation is product by process in nature (MPEP 2113). Nagao's mixing and coating from a solvent would be expected to result in the same final product after drying as applicant's extrusion technique.

Claims 10-16 and 18-23 rejected under 35 U.S.C. 103(a) as obvious over Nagao EP837085 in view of Evans 6214514.

Nagao claims (#11) a polycarbonate based on bisphenol compounds and –O-Rf^2 terminal groups. Rf^2 (claim 12) can be F-$(CF_2)_r$-$(CH_2)_s$- which corresponds to applicant's preferred endgroups R^1 and R^2 when "r" is 4-15 and "s" is 2. The compound 1H, 1H, 2H, 2H perfluorohexanol (page 13 line 53) is one of several specific endcapping agents named that meet applicant's preferred R^1 and R^2. This polymer can be combined with antioxidants such as phenolic antioxidants (page 81 line 18; page 82 line 10). The

polymer can be combined with another polycarbonate (page 18 line 16). Inherently, such a blending step would lower the surface energy of the other polycarbonate. The reduced viscosity of the polycarbonate (abstract) can be as low as 0.2 dl/g which indicates a low molecular weight and relatively few repeating units. Ishiwa '878 is cited for his correlation between Mw and viscosity (col 8 line 34).

Nagao forms a charge transfer layer by combining the polycarbonate(s), charge transfer substance and methylene chloride solvent to form a coating fluid and then coats the composition on a substrate (page 95 line 21-24). Nagao does not state extrusion coating was used to form the layer.

Extrusion coating is a conventional technique for forming charge transport (ie charge transfer) layers. Evans extrudes a methylene chloride solution of polycarbonate with N,N'-diphenyl-N,N'-bis(3-methylphenyl)-(1,1'biphenyl)-4,4'diamine (col 12 line 7-14) to form a charge transport layer. Note that Nagao and Evans use the same charge transfer substance (see "C-1" page 101 of Nagao).

It would have been obvious to use any common technique to form Nagao's charge transfer layer including extrusion coating.

Additionally, Nagao does not teach the relative amounts of fluorinated polycarbonate and other polycarbonate of applicant's claim 13.

It would have been within the ordinary skill of the art to vary the proportions of each polycarbonate to obtain a final product with the "in-between" properties of each.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 571-272-1084. The examiner can normally be reached on weekdays from 10 to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Buttner

11/4/09

/David Buttner/

Primary Examiner, Art Unit 1796